

REMARKS

This is a full and timely response to the Office Action mailed September 15, 2009.

By this Amendment, claims 3, 5, 7-9, 16 and 17 have been amended to depend on claim 18. Further, claims 18 and 20 have been amended to address the rejection under 35 U.S.C. §112, second paragraph. Lastly, claim 1 has been canceled without prejudice or disclaimer to its underlying subject matter. Thus, claims 3 and 5-20 are currently pending in this application. Support for the claim amendments can be readily found variously throughout the specification and the original claims.

In view of these amendments, Applicant believes that all pending claims are in condition for allowance. Reexamination and reconsideration in light of the above amendments and the following remarks is respectfully requested.

Rejection under 35 U.S.C. §112

Claims 1, 18 and 20 are rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite. With regard to claim 1, this rejection has been rendered moot by the cancellation of the claim. Further, Applicant believes that the amendments to claims 18 and 20 overcome this rejection by deleting the phrases or term "*more or less*", "*in the form of a plate*" and "*generally*", and amending the phrase "*devoid of*" to "*formed separately from*." Thus, in view of such changes to the claims, this rejection can no longer be sustained and should be withdrawn.

Rejections under 35 U.S.C. §103

Claims 1, 3, 5-9, 12-14 and 16-17 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jeffries et al. (U.S. Patent No. 5,221,050) in view of Coffee et al. (U.S. Patent No. 6,595,208 B1). Applicant respectfully traverses this rejection.

To establish an obviousness rejection under 35 U.S.C. §103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the

analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "*identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements*" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385, 1396 (2007). Further, the Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). Still further, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. *See in re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Finally, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure.

As discussed in Applicant's previously filed remarks, the Examiner fails to establish a *prima facie* case of obviousness because the combined prior art fails to disclose or suggest all of the claim limitations. Claim 18 recites, *inter alia*:

wherein the device further comprises a field electrode surrounding the reservoir, said field electrode being connected to said high voltage generator for providing the entire liquid composition with a common electric potential;

wherein the reservoir is configured to provide a removable cartridge, said reservoir being formed separately from the field electrode;

wherein said field electrode is shaped to surround the reservoir.

The prior art of record fails to teach or suggest at least these features of claim 18. The Examiner concedes that Jeffries et al. fails to teach these features (see pages 5-6 of the non-final Office Action), and relies on Coffee et al. to cure this deficiency in Jeffries et al. However, as explained in Applicant's previous remarks of April 30, 2009 and June 30, 2009, the electrode 60 of Coffee et al. differs from the claimed field electrode in its spatial arrangement and function. Coffee et al. teaches the use of an additional electrode having a different electric potential from the comminution site and surrounding only the comminution site for providing the different potential to only a portion of the liquid advancing to the comminution site.

In support, Applicant wishes to note the following teachings in Coffee et al.

A further electrode 60 is positioned so as to be separated from the comminution site 40 by the discharge electrode 50. In the arrangement shown in FIG. 2, the discharge electrode 50 and further electrode 60 are concentrically disposed with respect to the comminution site so that the discharge electrode 50 surrounds the comminution site 40 and is in turn surrounded by the further electrode 60. The further electrode may extend as far as the outlet 4 of the housing. The further electrode 60 comprises a perforate electrically conductive or semiconductive body which may, effectively, form an inner wall of the second chamber 3b so as to bound a comminution chamber or area 3a (apparently 3b) of the device. For example the further electrode 60 may comprise a tube or cage of wire mesh. The wall 7 of the second chamber 3b is formed with one or more apertures 8 to allow air to enter the second chamber 3b. The apertures may be symmetrically disposed around the comminution site so as to facilitate a symmetrical air flow. The comminution sit [sic] 40, discharge electrode 50 and further electrode 60 are connected to respective voltage outputs 22, 23 and 24 of the voltage generator and control circuit 21 which is arranged to provide respective voltages so that the voltage applied to the further electrode 60 is intermediate the voltages applied to the comminution site 40 and the discharge electrode 50. In this example, the circuit 21 is arranged to supply a negative voltage to the comminution site 40, a positive voltage to the discharge electrode 50 and earth or ground potential to the further electrode 60. The further electrode 60 has the further advantage of shielding the comminution chamber 3a from external electromagnetic fields so that the electrical fields within the device are not detrimentally affected when, for example, the device is held by a user (see column 5, line 58 - column 6, line 23 of Coffee et al.) (emphasis added)

Coffee et al. also discloses:

As the user breaths in, air is entrained through the apertures 8 in the second chamber 3b and through the perforate further electrode 60 into the comminution chamber bounded by the further electrode 60. This general movement of air through the perforate electrode 60 hinders or inhibits charged liquid droplets or other charged comminution products from impacting on the electrode 60 (see column 6, line 66 - column 7, line 7, of Coffee et al.) (emphasis added)

As apparent from the above disclosure, the further electrode 60 is designed to be connected to a ground (*i.e., earth or ground potential*) and to have a different electric potential from the discharge electrode 50 (*i.e., the voltage applied to the further electrode 60 is intermediate the voltages applied to the comminution site 40 and the discharge electrode 50*) for the purpose of attracting the comminuted material away from the discharge site (*i.e., to bound and shield the comminution chamber 3a, thereby inhibiting comminution products from impacting the further electrode 60*). Thus, the discharge electrode 50 and further electrode 60 do not have a common electrical potential.

In addition, one of ordinary skill in the art would not be motivated to modify Coffee et al. so that the further electrode 60 has a common electrical potential with the discharge electrode 50. As noted above, the further electrode 60 is designed to be connected to a ground to have a different electric potential from discharge electrode for attracting the comminuted material away from the discharge site. If one skilled in the art were to modify the further electrode 60 to have a common electrical potential with the discharge electrode 50, such modification would render the invention of Coffee et al. unsatisfactory for its intended purpose or, at the very least, change the principle of operation of the invention of Coffee et al. If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Also, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Further, from a physical configuration point of view, the further electrode 60 may surround the discharge electrode 50, but does not surround the reservoir. The Examiner argues in the Office Action that the electrode is connected to the voltage generator via circuits shown at numeral 23 of Figure 2 of Coffee et al. which does surround the reservoir. However, Applicant strongly disagrees with the Examiner's interpretation in this regard.

The numeral "23" is used to denote voltage output (see column 6, line 10-12, of Coffee et al.), or voltage supply line (see column 6, line 61, of Coffee et al.), and does not denote the

electrode surrounding the reservoir. As best understood from the disclosure of Coffee et al., the voltage output or supply line (23) is a cable or wire extending from the voltage generator and control circuit (21) to the discharge electrode (50) aside from the reservoir (45), and is therefore not intended to realize the electrode as an active element in relation to the reservoir.

Thus, because Coffee et al. does not teach a field electrode *surrounding the reservoir* and connected to a high voltage generator for providing the entire liquid composition with more or less *a common electric potential*, Coffee et al. fails to cure the deficiency of Jeffries et al.

Second, the Examiner has failed to establish a *prima facie* case of obviousness because one of ordinary skill in the art would not have been prompted to combine the prior art elements in the manner claimed. Jeffries et al. relates to an electrostatic sprayer that is configured to provide a flow of liquid over a certain length of time (see column 4, line 60, to column 5, line 3, of Jeffries et al.). Coffee et al., on the other hand, is clearly not for the continuous spray of liquid (see Figure 3b, 6a, and 7 of Coffee et al.). Coffee et al. discloses, “The user first primes the device by rotating the lever 74 in its slot 75 in the direction of the arrow A in FIG. 6b and against the biasing force of the coil spring 73 so winding up the coil spring” (see column 10, lines 27-31 of Coffee et al.), and “the user then depresses a button (not shown) to release the engagement between the detent 76 and the lever 74 allowing the coil spring 73 to twist the threaded shaft of the piston rod 70 through a set angle at a set so that the cooperation between the piston rod 70 and nut 49 causes the piston 47b to move through the syringe 47 so that *a metered amount of liquid* is supplied at a steady rate from the syringe to the liquid supply pipe 33 (see column 10, lines 46-53 of Coffee et al.). Thus, only a metered amount of liquid can be discharged without once again priming the device. As such, the Examiner’s reasoning for the combination of Jeffries et al. and Coffee et al. is flawed, and Coffee et al. cannot be said to disclose continuous spray of a liquid.

Also, the delivery system of Jeffries et al. relies on physical positive pressure applied to the flexible sachet containing the liquid. In contrast, the specific embodiments shown in FIG. 6a and FIG. 7 of Coffee et al. include pumps that are not in downstream relationship with the reservoir. Coffee et al. does depict a chamber in downstream relation with the reservoir (see Figure 2 of Coffee et al. and suggest a variety of pumps (see column 5, lines 16-33, of Coffee et al.), but Coffee et al. does not provide specific teachings regarding such embodiments. Hence, even if one skilled in

the art were to employ the delivery system of Coffee et al. and apply it to Jeffries et al., one skilled in the art would employ the system of either FIG. 6a and FIG. 7 of Coffee et al., rather than a system that is not adequately described.

Therefore, even though the devices of Jeffries et al. and Coffee et al. are both in the field of electrostatic devices, their purpose and method of delivery are very different. As such, one of ordinary skill in the art would not have been prompted to combine the references in the manner claimed.

In addition, as noted in the previous responses, the Examiner is using hindsight to randomly select and combine the elements of the devices of Jeffries et al. and Coffee et al. In the rejection, the Examiner merely lists the elements of the present invention and locates such elements in Jeffries et al. and Coffee et al. without any regard as to whether one skilled in the art would be motivated to combine the elements in Jeffries et al. with the elements in Coffee et al. This is impermissible hindsight because the Examiner is relying on Applicant's own disclosure to establish his case of obviousness. Thus, the Examiner's conclusion of obviousness in this case is based on improper hindsight reasoning.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claim 18. Claims 3, 5-9, 12-14, 16-17, and 20 depend directly or indirectly from claim 18 and are allowable at least for this reason. Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention, Applicant respectfully submits that independent claim 18, and all the claims that depend therefrom, are allowable.

Claims 10, 11, and 15 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jeffries et al. (U.S. Patent No. 5,221,050) in view of Coffee et al. (U.S. Patent No. 6,595,208 B1), and further in view of Hartle et al. (U.S. Patent No. 5,725,161). Applicant respectfully traverses this rejection.

Applicant respectfully submits that claim 18 is allowable over Jeffries et al. and Coffee et al., in combination with Hartle et al., which the Examiner has cited to teach a transformer, a housing provided with a button for releasing an inner cover therefrom and a switch knob for

actuating a pump, and an outer cover provided to fit over the inner cover (see pages 9-10 of the Office Action). This is due to the fact that despite such teachings of Hartle et al., Hartle et al. still fails to cure the deficiencies of Jeffries et al. and Coffee et al. noted above with regard to claim 18. Hence, claims 10, 11 and 15 are allowable at least because they depend from an allowable claim 18.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claims 10, 11 and 15.

Claim 19 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jeffries et al. (U.S. Patent No. 5,221,050) in view of Coffee et al. (U.S. Patent No. 6,595,208 B1), and further in view of Sano et al. (U.S. Patent Application Publication No. 2003/0197075 A1). Applicant respectfully traverses this rejection.

Applicant respectfully submits that claim 18 is allowable over Jeffries et al. and Coffee et al., in combination with Sano et al., which the Examiner has cited to teach a field electrode composed of a first plate and a second plate both made of an electrically conductive metal and shaped to define therebetween said concavity surrounding the entire area of the reservoir (see pages 10-11 of the Office Action). Although Applicant disagrees with the Examiner's conclusion in this regard, even assuming Sano et al. contain such teachings, Sano et al. still fails to cure the deficiencies of Jeffries et al. and Coffee et al. noted above with regard to claim 18. Hence, claim 19 is allowable at least because it depends from an allowable claim 18.


Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claim 19.

CONCLUSION

For the foregoing reasons, all the claims now pending in the present application are believed to be clearly patentable over the outstanding rejections. Accordingly, favorable reconsideration of the claims in light of the above remarks is courteously solicited. If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

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